Amendment to the Claims:

Claims 1-46 (Cancelled)

47. (Currently Amended) A method for determining the suitability of a wire communication line for xDSL service via single-ended analysis, comprising:

obtaining a return waveform by using a TDR at a single end of the wire communication line;

determining a transfer function based on the return waveform, the transfer function representing a signal strength or signal loss for each of the plurality of xDSL frequency bands; and

analyzing the transfer function so as to qualify the wire communication line for xDSL use.

48. (Previously presented) The method according to claim 47, wherein the step of determining includes:

deriving a plant map of the wire communication line from the return waveform, the plant map representing the structural layout of the wire communication line; and

deriving the transfer function by performing circuit modeling analysis on the plant map.

49. (Previously presented) The method according to claim 47, wherein the step of determining includes comparing the return waveform against a library of known transfer functions that represent known wire plant models to estimate the transfer function of the wire communication line.

50. (Previously presented) The method according to claim 47, further comprising:

obtaining a noise signal over the plurality of xDSL frequency bands of the wire communication line;

wherein the step of analyzing includes qualifying the wire communication line based on the determined transfer function and the obtained noise signal.

51. (Previously presented) A method for determining the suitability of a wire communication line for xDSL service use via single-ended analysis, comprising the steps of:

receiving a return waveform by using a TDR at a single end of a wire communication line;

determining a plant map of the wire communication line based on the received return waveform, the plant map representing a physical layout of the wire communication line;

determining a transfer function representative of the determined plant map; and

analyzing the transfer function so as to qualify the wire communication line for xDSL use.

52. (Previously presented) The method according to claim 51, wherein the step of determining a plant map includes determining a wire gauge and length of the wire communication line.

53. (Previously presented) The method according to claim 51, further comprising measuring wideband noise in the wire communication line and the step of analyzing includes analyzing both the transfer function and the measured wideband noise of the wire communication line.

54. (Previously presented) The method according to claim 51, wherein the step of determining a transfer function includes determining the complex impedance of the wire communication line.

55. (Previously presented) The method according to claim 54, wherein the step of determining a transfer function includes performing circuit modeling analysis on the plant map.

56. (Previously presented) The method according to claim 54, wherein the steps of determining a plant map and determining a transfer function include comparing the return waveform against a library of known transfer functions that represent known wire plant models to estimate the transfer function of the wire communication line.

57. (Previously presented) The method according to claim 51, wherein the step of analyzing the transfer function includes determining a signal-to-noise ratio and a bit rate for the wire communication line.

58. (Previously presented) The method according to claim 57, wherein the step of analyzing further includes determining a maximum bit rate and confidence factor based on the determined bit rate and the signal-to-noise ratio for the wire communication line.

59. (Previously presented) The method according to claim 51, wherein the step of determining a transfer function includes deriving the transfer function by performing circuit modeling analysis on the plant map.

60. (Previously presented) The method according to claim 51, wherein the steps of determining a plant map and determining a transfer function include comparing the return waveform against a library of known transfer functions that represent known wire plant models.

61. (Currently Amended) A system for conducting single-ended qualification of wire communication lines for xDSL use, comprising:

a TDR that transmits a signal at a single end of a wire communication line and receives a return waveform; and

a controller device connected to the TDR and operable to determine a transfer function based on the received return

waveform and to analyze the transfer function so as to qualify the wire communication line for xDSL use, the transfer function representing a signal strength or signal loss for each of the plurality of xDSL frequency bands of the wire communication line.

62. (Previously presented) The system according to claim 61, wherein the controller device determines the transfer function by:

deriving a plant map of the wire communication line from the return waveform received by the TDR wherein the plant map represents the structural layout of the wire communication line; and

performing circuit modeling analysis on the derived plant map.

63. (Previously presented) The system according to claim 61, wherein the controller device determines the transfer function by comparing the return waveform against a library of known transfer functions that represent known wire plant models.

64. (New) A method for determining the suitability of a wire communication line for xDSL service via single-ended analysis, comprising:

transmitting by a TDR a test signal at a single end of the wire communication line;

obtaining a return waveform of the transmitted test signal;

determining a signal strength or loss of the wire communication line for each of the plurality of xDSL frequency bands based on the obtained return waveform; and

calculating a bit rate of the wire communication line for xDSL use based on the determined signal loss.

65. (New) The method according to claim 64, further comprising:

obtaining a noise signal over the plurality of xDSL frequency bands of the wire communication line;

wherein the step of calculating includes determining the S/N ratio based on the determined signal strength or loss and the obtained noise signal.

66. (New) The method according to claim 65, wherein the step of calculating further includes determining a confidence factor of the calculated bit rate.

67. (New) The method according to claim 64, wherein:

the step of determining includes deriving a plant map of the wire communication line from the obtained return waveform, the plant map representing the structural layout of the wire communication line; and

the signal strength or loss is obtained by performing circuit modeling analysis on the derived plant map.

68. (New) The method according to claim 67, wherein the step of deriving a plant map includes determining a wire gauge and length of the wire communication line.

69. (New) The method according to claim 64, wherein the step of determining a signal strength or loss includes comparing the obtained return waveform against a library of known signal losses that represent known wire plant models.